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INTER-STATE DISPARITIES IN PER CAPITA SDP: AN EXPLORATORY STUDY

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Introduction

Probably no other aspect of the Indian economy has received as much attention as that of regional disparities both in the academic as well as in the political circles. From the beginning of the planning process it has been a major issue in the Indian political economy. Consequently, development of the backward areas and balanced regional development have been reiterated as among the major objectives of the successive Five Year Plans of the country. A large battery of instruments has been pressed into service, sometimes ignoring the questions of economic efficiency and cost, to achieve these objectives. Nevertheless the problem of regional disparities has continued to stubbornly persist over the decades.

Objectives and Scope

The problem of regional disparities can be discussed at various levels. In the present paper we will confine ourselves to the question of inter-state disparities. We will first examine the trends in the total and per capita state domestic product for major states of the Union and then examine the

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trends in regional disparities. Attention will then be focussed on some of the basic factors associated with inter-state disparities. In the end, some of the policy issues touching upon regional disparities will be briefly discussed.

Data Base

The analysis covers the period 1970-71 to 1984-85 and is mainly based upon the series of net state domestic product at constant 1970-71 prices prepared by the State Statistical Bureaus and compiled by CSO in a recent brochure (1).

Growth of Total SDP

As can be seen from Table 1, there are large variations in the rate of growth of total SDP among states - from 1.90 per cent per annum to 5.16 per cent per annum. Punjab, Haryana, Gujarat, Jammu and Kashmir and Maharashtra have been the fastest growing states. On the other hand growth rates were lowest in the states of Tamil Nadu, West Bengal, Kerala and Himachal Pradesh.

Similarly large inter-state differentials can be observed in the sectoral rates of growth particularly so in the case of the registered manufacturing sector, despite the fact that it has been the main area of policy intervention.

Sectoral Pattern of Growth

In general the sectoral pattern of growth has been more

balanced in the rapidly growing states of Punjab, Haryana, Gujarat, Jammu and Kashmir and Maharashtra, which have registered above average growth in all the sectors. The states of Andhra Pradesh, Assam, Karnataka and Uttar Pradesh, which fall in the medium category in terms of growth rate, also exhibit a sectorally balanced pattern of growth. Among the slow growing states Himachal Pradesh, Kerala and Tamil Nadu show relative stagnation in all the three sectors. Orissa, Rajasthan and West Bengal show above average growth rate in the primary sector but below average growth in the secondary and the teritary sectors. On the other hand, in Bihar and Madhya Pradesh the primary sector shows stagnation but the secondary and teritary sectors show satisfactory progress. The close association of the growth rate of SDP and sectoral growth rates.

Growth of Per Capita SDP

In terms of per capita SDP the states which registered most rapid rate of increase are Punjab, Maharashtra, Haryana, and Gujarat, which are also the richest states. On the other hand the growth rate of per capita SDP was nominal in the case of Kerala, Assam and Rajasthan. Himachal Pradesh is the only state which shows a decline in per capita SDP over the period. On the whole it appears that the poorer states have shown below average growth rate in per capita SDP, implying

a widening in the income disparities. The coefficient of correlation between the level of per capita SDP and rate of growth of per capita SDP is +0.6928. Similar inverse relationship was also observed by the author for the earlier period (4).

Trends in Inter-State Disparities

Table 2 shows the trends in the selected indicators of regional disparities, e.g., coefficient of variation, range and minimum - maximum ratio. Inspite of the various policy measures we find that the extent of inter-state disparity has sharply increased over the years. The sixties had also witnessed a process of divergence (4). The process of divergence seems to have been arrested since the beginning of the eighties. This period is also marked by a tilt in resource transfer in favour of the poor states (3). One would, therefore, watch with interest the trends in regional disparities in coming years to find out whether the recent shift is a lasting phenomenon or not.

Factors in Regional Disparities

The regional imbalances in the Indian economy and the uneven spatial pattern of growth are the result of deeprooted historical, demographic and structural factors which cannot be fully explored here. However, we have tried to see their association with some of these variables. We have correlated

the levels of per capita SDP and growth rate of total SDP separately with three sets of factors, namely, land resource base, economic structure and infrastructural development. Statewise data have been given in Tables 3,4 and 5 respectively. The values of coefficient of correlation and coefficient of variation have also been given in the end of the tables.

Some interesting results emerge from our analysis. Poverty is found related positively to the size and population of the states. The coefficient of correlation of per capita SDP with population density is not significant. Significantly resource base in terms of net cultivated area per agricultural worker and average size of operational holdings turns out to be an important variable. The present demographic disbalance of these states is the result of a long historical process of concentration of population in the once land rich and fertile regions around the major river systems of the country particularly the Ganga basin (4). The structural variables also turn out to be significant as per capita SDP is negatively correlated with the share of agriculture in total workers and total SDP. On the other hand, urbanization and growth of the secondary and teritary sectors exercise a positive influence on per capita SDP. Similarly, the development of socio-economic infrastructure is found to be strongly associated with per capita SDP.

Analysing the determinants of the growth rate of SDP, we find that land base has been an important variable, but the coefficient for area and population size, though positive are not statistically significant. Variables related to economic structure have not been found significant, though urbanization is positively associated with growth rates. Growth rates are found to be positively correlated with economic infrastructure particularly with power consumption and road transport. But the relationship is surprisingly week in case of facilities of institutional credit as also with social infrastructure.

We may now look at the role of another major determinant of rate of growth, i.e., saving and investment rate. Mathur found that the correlation of savings generated with regional economic growth (0.27), although positive was not significant (2, p.193), Inclusion of fiscal transfers did not improve the explanatory power of the savings variable, but the flow of institutional finance was found highly correlated with regional growth ($r = 0.74$) and its inclusion in savings raised the correlation to 0.44.

Prasad (3) has also recently looked into the relationship between per capita SDP rates of growth, state plan outlays and flow of resources to the states. Some of the data analysed by him has been reproduced in Table 6. Using multiple regression analysis he found that while st te plan

outlay had positive impact on growth rate during the period 1969-70 to 1984-85, the impact of central and centrally sponsored projects was negative and that of investment in central government non-departmental undertakings though positive was insignificant. Prasad also found that while the resource transfer through Finance Commission, Planning Commission as well as through Central Government investment has favoured the poorer states on the whole, it has been inadequate to arrest the trend in regional inequalities. Financial disbursement through public sector financial institutions, on the other hand, was found to be regressive.

Policy Conclusions

The above discussion has revealed that though the forces of growth are fairly widespread the process of growth has been spatially uneven resulting in accentuation of regional disparities. The policy instruments devised to promote a more balanced pattern of regional development are not strong enough to arrest the divergent trend in inter-state disparities. Efforts on a more systematic and larger scale than in the past are needed to attain the objective of balanced regional development. A few suggestions in this respect are offered below.

Firstly, policy objectives in terms of the balanced regional development have to be more clearly specified and monitored carefully. Since the concept of backwardness is

itself vague, it should be properly spelled out. Multi-dimensional nature of the problem has to be clearly grasped.

Secondly, it should be realized that there would always be some differences in the potential as well as the level of development in different regions. What can be assured through state policy is that differences in infrastructure and social consumption in different parts of the country are not very large as at present. Minimum Needs Programme has, therefore, to be enlarged and strengthened to provide a minimum level of social facilities in all parts of the country.

Thirdly, the focus should be on accelerating the growth rate in the slow growing regions. Any global policy for the development of the backward states as a whole is not likely to be very successful. Such a policy should be region specific and must take into account the economic, demographic, administrative and institutional constraints affecting the growth performance of each region or state. Our analysis has highlighted two important areas from the point of view of promoting growth in the backward areas : one is the need to speed up the process of structural change to reduce the demographic pressure on land; and, second is the need for strengthening the economic and financial infrastructure.

Fourthly, the rate of investment has to be encouraged in the backward states both through mobilizing more internal resources as well as ensuring a much larger flow of resource from outside through different mechanisms. The working of the financial institutions has to be effectively oriented in favour of the poorer states.

Fifthly, in the absence of regional linkages the location of large public sector projects in backward pockets has failed to dynamise the local economy. Hence, these projects should be d vetailed with the regional development plans by consciously developing regional linkages.

Finally, the tendency to spread the resources too widely and thinly should be resisted. The appraach of concentrating investment on selected growth points and gradual deconcentration would be economically more rewarding.

Table 1 : Statewise Exponential Growth Rates of Total Sectoral and Per Capita State Domestic Product at Constant Prices - 1970-71 to 1983-84.

(Per Cent Per Annum)

States	Per Capita SDP*	Primary sector	Secondary sector	Manufacturing sector (Regd)	Tertiary sector	Total SDP	Per Capita SDP
1. Punjab	1443	4.00	5.98	8.68	6.84	5.16	2.91
2. Haryana	1089	3.03	6.23	7.49	8.08	4.92	2.32
3. Gujarat	937	3.26	5.84	6.92	5.90	4.74	2.24
4. Maharashtra	891	4.27	5.02	6.03	4.73	4.68	2.34
5. West Bengal	757	2.45	2.07	1.49	4.06	2.90	0.80
6. Karnataka	700	2.06	5.63	7.74	5.12	3.75	1.25
7. Andhra Pradesh	693	2.18	5.47	6.07	5.89	3.89	1.73
8. Himachal Pradesh	687	1.47	2.62	3.51	2.96	1.90	-0.01
9. Jammu & Kashmir	637	2.86	7.03	16.88	5.36	4.58	1.93
10. Tamil Nadu	628	-0.70	4.15	5.25	4.99	2.85	1.23
11. Kerala	627	-0.20	3.28	3.71	4.30	2.17	0.40
12. Rajasthan	570	2.37	3.15	4.93	4.73	3.18	0.29
13. Assam	554	2.33	4.36	3.19	6.91	3.57	0.38
14. Orissa	533	3.18	2.10	0.18	3.89	3.30	1.42
15. Madhya Pradesh	531	1.56	5.31	7.28	5.98	3.41	1.18
16. Uttar Pradesh	529	2.78	6.77	5.66	4.33	3.90	1.56
17. Bihar	427	1.12	5.61	5.61	6.67	3.42	1.07
India	713	2.14	4.30	4.67	5.89	3.89	1.61
Coefficient of variation (Per cent)		56.82	32.57	59.20	23.80	24.76	58.96
Maximum - Minimum Ratio			3.40	11.33	2.73	2.27	
Coefficient of Correlation:							
(a) with per capita SDP		+0.5252	0.2680	+0.2486	+0.3895	+0.6233	0.6528
(b) with rate of growth of SDP		+0.7496	+0.7485	+0.5816	+0.6496	+1.0000	+0.9040

*Average of 1981-84 at 1970-71 prices.

Table 2 : Trends in Inter-State Disparities in Per Capita SDP : 1970-85.

Year	Coefficient of Variation(%) Unweighted	Weighted	Standard Deviation(Rs.)	Range	Maximum/ Minimum Ratio
1970-71	25.75	24.12	153	668	2.66
1971-72	27.19	25.62	161	678	2.67
1972-73	27.10	23.98	145	702	2.77
1973-74	26.91	25.97	161	726	2.90
1974-75	28.50	27.38	169	728	2.86
1975-76	28.11	26.99	179	783	2.91
1976-77	31.79	29.55	193	825	2.97
1977-78	31.15	28.67	199	889	3.06
1978-79	32.14	29.97	215	956	3.21
1979-80	36.42	34.57	230	976	3.48
1980-81	33.44	29.97	209	953	3.24
1981-82	34.00	30.53	220	1022	3.37
1982-83	35.22	30.04	217	1054	3.37
1983-84	32.35	28.45	217	1015	3.22
1984-85	34.47	29.29	227	1053	3.17

Notes : 1. Coefficient of variation and other indicators of disparities have been computed from the series of per capita state domestic product at constant 1970-71 prices given in CSO (1).

2. Shares of states' in the national population have been used as weights.

3. Weighted C.V. and standard deviations have been computed around national per capita SDP.

Table 3 : Statewise Sectoral Composition of Working Force and SDP.

States	Per Capita SDP*	% of Workers in Agriculture Sector	% Share in SDP at Current Prices 1983-84 Primary Sector	Secondary Sector	Tertiary Sector
1. Punjab	1443	58.0	43.3	22.0	34.7
2. Haryana	1089	60.8	46.3	23.0	30.7
3. Gujarat	937	60.1	35.0	27.2	37.8
4. Maharashtra	891	61.7	28.6	32.5	38.9
5. West Bengal	757	55.0	40.2	23.1	36.7
6. Karnataka	700	65.0	42.8	27.9	29.1
7. Andhra Pradesh	693	69.5	45.7	16.2	38.1
8. Himachal Pradesh	687	70.8	46.4	19.4	34.2
9. Jammu & Kashmir	637	60.3	52.5	16.9	30.6
10. Tamil Nadu	628	61.0	22.2	29.3	48.5
11. Kerala	627	41.3	40.5	30.3	39.2
12. Rajasthan	570	68.9	54.7	16.0	29.3
13. Assam	554	63.3	62.22	12.04	25.74
14. Orissa	533	74.7	66.3	10.0	23.7
15. Madhya Pradesh	531	76.2	54.0	20.8	25.2
16. Uttar Pradesh	529	74.5	43.0	20.7	36.3
17. Bihar	427	79.1	48.6	20.6	30.8
India	713	66.5	39.7	22.3	38.0
Coefficient of Variation %		13.92	23.51	28.46	18.20
Maximum/Minimum Ratio		1.92	2.98	3.25	2.05
Coefficient of Correlation:					
(a) with per capita SDP		-0.4332	-0.3327	+0.3187	+0.2243
(b) with rate of growth of SDP		-0.0063	-0.0771	+0.0631	-0.0876

*Average of 1981-84 at 1970-71 prices.

Table 4 : Statewise Indicators of Population and Land Resource Base

States	Per Capita SDP*	Geographical Area ('000 Sq.Km)	Population in lakhs 1981	Population Density (Person/Sq.Km) 1981	% Urban population 1981	Net Cultivated Area per person, 1983-84	Area per Agr. worker 1983-84	Average size of operational Holdings in Hect. 1980-81
Punjab	1443	50	168	333	27.7	0.24	1.47	3.79
Haryana	1089	44	129	292	21.9	0.26	1.62	3.52
Gujarat	937	196	341	173	31.1	0.27	1.45	3.45
Maharashtra	891	308	628	204	35.0	0.28	1.22	2.95
West Bengal	757	89	546	615	26.5	0.09	0.63	0.94
Karnataka	700	192	371	194	28.9	0.27	1.19	2.73
Andhra Pradesh	693	275	536	195	23.3	0.20	0.73	1.87
Himachal Pradesh	687	56	43	76	7.0	0.13	0.57	1.54
Jammu & Kashmir	637	222	60	27	21.1	0.12	0.65	0.99
Tamil Nadu	628	130	484	372	33.0	0.12	0.50	1.07
Kerala	627	39	255	655	18.7	0.08	0.78	0.43
Rajasthan	570	342	343	100	21.0	0.44	2.26	4.44
Assam	554	78	199	254	10.3	0.13	0.69	1.36
Orissa	533	156	264	169	11.8	0.22	0.93	1.59
Madhya Pradesh	531	443	522	118	20.3	0.35	1.26	3.42
Uttar Pradesh	529	294	1109	377	17.9	0.15	0.72	1.01
Bihar	427	174	690	402	12.5	0.10	0.46	0.99
India	713	2986	6852	216	23.3	0.20	0.96	1.82
Coefficient of Variation %		63.80	66.33	63.69	36.50	48.30	47.12	60.42
Max/Min Ratio		11.36	25.79	8.61	5.00	5.50	4.91	10.33
Coefficient of Correlation :								
(a) with per capita SDP		-0.3740	+0.0505		+0.2080			+0.5273
			-0.3425	+0.4905		+0.4286		
(b) with rate of growth of SDP		+0.1585	-0.2741		+ 0.3525			+0.5129
			+0.0064	+0.4713		+0.4150		

*Average of 1981-84 at 1970-71 prices.

Table 5 : State-wise Indicators of Socio-Economic Infrastructure

States	Per Capita SDP*	Consumption of Electricity per capita KWtH 1984-85	Surface Road per 100 Sq. Km. 1981-82	Regd. Vehicle per lakh 1982-83	No.of Primary & Jr. Basic School per lakh of population 1983-84	No.of Allopathic Hospitals per lakh 1982-83	Beds Available in hospital per lakh 1983	Population per Bank Branch (000) 1985	Credit Deposit Ratio 1985	Cooperative Credit per ha. of NSA (Rs.) 1983-84
Punjab	1443	354	65	2615	70	11	119	8.5	44.6	1083
Haryana	1089	229	42	1211	35	3	58	11.9	67.6	993
Gujarat	937	282	6	1510	32	4	111	11.3	54.7	389
Maharashtra	891	292	9	1728	56	7	128	13.1	90.8	52[illegible]
West Bengal	757	129	17	768	78	1	87	17.2	51.9	41[illegible]
Karnataka	700	190	27	1359	59	5	86	9.7	86.7	378
Andhra Pradesh	693	167	13	735	74	2	64	13.2	78.3	463
Himachal Pradesh	687	111	8	879	147	7	89	8.1	44.0	477
Tamil Nadu	628	228	28	844	56	2	81	12.4	98.6	1022
Kerala	527	129	41	875	26	6	169	9.4	68.6	500
Rajasthan	570	131	10	774	64	4	54	13.2	70.5	216
Assam	554	46	7	554	119	3	55	23.3	53.3	53
Orissa	533	126	8	296	131	2	43	15.7	92.8	362
Madhya Pradesh	531	157	12	1728	56	2	31	14.4	62.6	208
Uttar Pradesh	529	109	17	539	62	2	44	15.5	49.2	374
Bihar	427	87	10	311	69	2	38	17.7	41.7	217
India	713	167	15	981	70	3	74	13.3	69.6	445
Coefficient of Variation (%)		46.81	80.70	58.10	46.05	65.66	46.89	28.35	27.63	60.99
Max/Min.Ratio		7.70	9.29	8.41	5.65	11.00	5.45	2.74	2.36	20.43
Coefficient of Correlation :										
a) with per capita SDP		0.8388	0.6866	0.9088	-0.3305	0.6694	0.4784	-0.5027	-0.1301	0.7209
b) with rate of growth of SDP		0.6832	0.2882	0.6214	-0.3949	0.2353	-0.0074	-0.0249	-0.0044	0.3261

*Average of 1981-84 at 1970-71 prices.

Table 6 : Plan Outlays and Resource Transfers to States As Per Cent of SDP at Current Prices.

States	Per Capita SDP*	State Plan Outlay	Devolution by finance commission	Central Plan Assistance	Expenditure on Central & Centrally sponsored projects	Investment in Central Non-Departmental undertakings
Punjab	1443	6.21	1.68	1.04	0.99	0.92
Haryana	1089	8.30	2.03	1.33	1.22	1.05
Gujarat	937	7.20	2.72	1.34	1.18	1.82
Maharashtra	891	5.91	2.44	1.00	0.88	3.66
West Bengal	757	4.62	3.39	1.16	0.86	2.22
Karnataka	700	5.86	3.41	1.64	1.17	2.98
Andhra Pradesh	693	5.72	3.97	1.93	1.56	3.38
Tamil Nadu	628	6.15	3.81	1.56	1.23	2.25
Kerala	627	6.18	4.44	2.17	1.05	1.41
Rajasthan	570	5.94	4.38	2.30	1.85	1.13
Assam	554	6.05	5.55	4.64	1.49	6.58
Orissa	533	6.93	6.75	3.34	2.49	4.88
Madhya Pradesh	531	7.94	4.58	2.38	1.82	5.45
Uttar Pradesh	529	6.92	4.87	2.43	1.51	1.32
Bihar	427	6.01	5.87	2.80	1.62	5.48
Coefficient of Variation %		13.97	34.82	46.02	30.28	40.86
Max/Min. Ratio		1.80	4.02	4.64	2.90	3.67
Coefficient of Correlation :						
(a) With per capita SDP		0.1194	-0.8619	-0.6466	-0.5642	-0.5343
(b) With rate of Growth of SDP		-0.3477	-0.1654	0.0466	-0.5530	-0.1042

*Average 1981-84 at 1970-71 prices.

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